



# MOBILITY ON DEMAND (MOD) SANDBOX DEMONSTRATION: ADAPTIVE MOBILITY WITH RELIABILITY AND EFFICIENCY (AMORE) FINAL REPORT

## Background

The Regional Transportation Authority (RTA) of Pima County Adaptive Mobility with Reliability and Efficiency (AMORE) project is one of 11 Mobility on Demand (MOD) Sandbox Demonstrations funded by the Federal Transit Administration (FTA). RTA partnered with Metropia and RubyRide to implement a pilot that aimed to provide more dynamic mobility services to residents of the Rita Ranch area in the Tucson region. RTA faced the common dilemma for area transit operators of a relatively low-density, auto-oriented exurban community; it operated a financially-constrained fixed-route bus service with limited capacity and low ridership and faced challenges delivering service with sufficient flexibility for the land use of the region. The AMORE project sought to enhance mobility and access to work and other destinations and to reduce personal car dependency in the region by integrating attributes of multiple emerging mobility services and technologies to deliver additional options for travel to local residents. Users engaged the system through an app that enabled them to book door-to-door service within the region.

## Objectives

The goal of the AMORE project was to test a flexible service for commuting or first/last-mile connections to fixed routes. The project team recognized that barriers to transit use outside of core transit service areas often stem from potential customers feeling that transit does not come close enough to them or run often enough or go to destinations they want to reach. Anticipated outcomes of the AMORE project included developing and deploying a new transit-hailing platform and service, introducing new modes into the community, using incentives to sway mode change, providing alternative modes to work/school, providing first/last mile connections to existing transit service, and providing new options for mobility impaired and older adults.

The objective of this study was to determine whether federal investments in urban circulator projects have a significant impact in creating, supporting, or preserving jobs, spurring local business growth, and increasing transportation accessibility among certain households. The urban circulator projects studied include the Cincinnati Bell Connector, Charlotte CityLYNX Gold Line, Sun Link Tucson Streetcar, Atlanta Streetcar, and the Salt Lake Sugar House Streetcar. The results of this research will serve to inform policymakers about the extent to which streetcar investments support USDOT strategic goals.

## Findings and Conclusions

*The AMORE project had limited impacts on travel and behavior; use of the system was low and dropped off during the project, which led to a high cost per trip that ultimately was not competitive with existing fixed route or on-demand services.*

Key lessons from the AMORE project include the following:

- Point-to-point Transportation Network Company (TNC)-like operations, not unlike traditional transit, are driven by the latent consumer demand of the operating environment. Even the best designed, lowest-cost service will not be valued over SOVs without a pain point compelling customers to switch modes. Take time to understand the demand in a given market before launching the service.

- Marketing a new service concept takes time, especially in today’s saturated media environment. Engaging local stakeholders is valuable, but it cannot replace traditional marketing strategies. Customer behavior is often slow to change, and even potential customers interested in using an alternative service may take time to fully shift their patterns.
- Tight integration between software platform developers and system operators is critical for a Mobility as a Service (MaaS)-type service. The positive feedback-loop between Metropia’s developers and RubyRide’s operators allowed for quick, flexible, and effective operational iteration of the platform software; however, the necessary but challenging software integration with a third-party insurance company demonstrated the risks of working with a remote and unintegrated participant.

Future research could develop a defined community qualification methodology that uses the pain point distribution concept to gain a better understanding of the state of current choices. Mainly what factors influence these choices and where the new service stands in comparison to current choices. This high-level assessment would be beneficial for an agency such as RTA to select one or several promising communities for deployment during the planning stage and would help increase the chance of success and reach a sound investment decision among multiple service options.

## **Benefits**

The AMORE project was an ambitious undertaking to deliver innovative mobility services to a low-density exurban environment. It provided lessons learned with respect to service area selection, issues of labor cost and reliability, insurance provisions, marketing, and other technical challenges that may allow future projects to provide better mobility service choices for low-density areas.

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